

Date: Tue, 2 Feb 93 21:08:42 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #158
To: Info-Hams

Info-Hams Digest Tue, 2 Feb 93 Volume 93 : Issue 158

Today's Topics:

Any other W9RG DSP Filter users on the
Bay area amateur radio stores
GELL-CELL battery charging?
Manual for Standard C150
MORSE FUTURE??
Real Hams Pass British Exams?
Solar panel night discharging (3 msgs)
Solar Panels: advice, sources (2 msgs)

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Wed, 3 Feb 1993 00:45:25 GMT
From: mvb.saic.com!unogate!news.service.uci.edu!usc.edu!howland.reston.ans.net!
bogus.sura.net!udel!gatech!concert!unccsun.uncc.edu!ws74!wlhamaty@network.UCSD.EDU
Subject: Any other W9RG DSP Filter users on the
To: info-hams@ucsd.edu

I'm waiting on a kit myself. One thing I was wondering: anyone have any idea if
the thing could be made to work with low-level audio. I could tap a signal out
from
my rig after the detector and 1st audio amp, take it through the filter,
then feed it back in for the final audio amp. Might have some advantages. For that
matter, there would probably be something to be said for feeding the filter hi-Z
low-level audio and letting it do the output to the speaker - the speaker amp
in my old tube rig has seen better days.

Subject: GELL-CELL battery charging?
To: info-hams@ucsd.edu

Does anybody know how to charge a GEL-CELL battery? I have two GEL-CELL's that I want to charge for a QRP rig and I don't know how to charge them...

Please E-mail me directly...I check my mail more often than I check the group...

KAIZHA

rono...

Date: 3 Feb 93 03:52:37 GMT
From: news-mail-gateway@ucsd.edu
Subject: Manual for Standard C150
To: info-hams@ucsd.edu

Does anybody out there has a manual for the Standard C150? Let me know in email what yo ask for. Thanks.

-kam, not a ham... yet
<tsang@isi.com>

Date: Tue, 2 Feb 93 17:28:13 GMT
From: qualcom.qualcomm.com!walter!porthos!dancer!whs70@network.UCSD.EDU
Subject: MORSE FUTURE??
To: info-hams@ucsd.edu

In article <7070005@hpuplca.nsr.hp.com> jeff@hpuplca.nsr.hp.com (Jeff Gruszynski) writes:

>In rec.radio.amateur.misc, mike.morrell@flbbs.nsr.hp.com writes:

>> Well here goes my two cents worth to the on-going debate.

>

>> 1. CW will remain for nostaglic reasons.

>

> CW will remain for *legal* reasons

> We have a CW requirement for amateurs in shortwave

> because international agreements under UN WARC.

> I suppose we could unilaterally abrogate this...

While the US could unilaterally drop the requirement, it most likely will not. That does not, however, mean that the US could not relax the speed required to gain HF privaledges

to 5wpm. Additionally, while correct about the international agreement requiring "knowledge of morse." there's nothing that mandates that such an agreement may not be mutually resinded at a future WARC. So legally bound today does not necessarily mean legally bound in the future.

>> Sorry, but I feel very strongly about this issue, and if you intend
>> to flame me about it - well so be it.

No flame intended, just a clarification that many seem to continually ignor (I'm not saying you deliberately did so) as to the international agreement requiring knowledge of morse.

73

Standard Disclaimer- Any opinions, etc. are mine and NOT my employer's.

Bill Sohl (K2UNK) BELLCORE (Bell Communications Research, Inc.)
Morristown, NJ email via UUCP bcr!cc!whs70
201-829-2879 Weekdays email via Internet whs70@cc.bellcore.com

Date: 2 Feb 93 11:46:58 GMT
From: biosci!parc!rocksanne!kzin!hdavies@ames.arpa
Subject: Real Hams Pass British Exams?
To: info-hams@ucsd.edu

In article 2128@mercury.cair.du.edu, awinterb@diana.cair.du.edu (Art Winterbauer) writes:

>Excuse me if this has been posted before.

>

>Could someone explain the amateur licensing hierarchy in Great Britain?

>It would also be interesting if someone could post some samples of

>the kinds of questions used in these exams. I've heard from a

>friend that G.B. has one type of code-free examination that is

>very technical, and I've wondered just how technical these exams

>can get.

>

>Will this spark another controversy; e.g., real hams pass the

>British exams?

>

>73 de Art, N00QS

>--

>Art Winterbauer N00QS

>Internet: awinterb@du.edu OR awinterb@diana.cair.du.edu

>Packet: n0oqs @ w0gvt.#neco.co.usa

Art,

This is all from memory, and may be a little out of date.

There are 4 classes of license in the UK. Novice 'A' and 'B' and "full" 'A' and 'B'. I put "full" in parentheses because I've never seen them get a formal name. Here are some details;

Novice licensees.

=====

The novice license is new and has only been going about a year.

- Take the novice RAE (Radio Amateur's Exam). Same exam for Novice 'A' and Novice 'B', but different exam from full RAE.
- Must have been through an accredited course of instruction, with emphasis on practical skills; construction, operating, etc.
- If they pass a Morse test, they get a Novice 'A' license, otherwise Novice 'B'. Morse test is a simulated QSO at 5wpm (receiving *AND* sending).
- Power outputs and bands are limited for both. Novice 'B' licensees can only operate from 70cms up (Note: No 2 meters!). Novice 'A' licensees are allowed on some HF bands, with power limits (4 watts? Not sure.)

Novice callsigns begin '2', followed by a country letter, using 'E' rather than 'G' for England, followed by a number describing the class ('0' for 'A' and '1' for 'B', I think) followed by 3 letters. So, a novice call might look like this;

2E1ABX

"Full" licensees.

=====

- Take a different exam. The "full" RAE. Don't need accredited instruction.
- Take a different (not for much longer) Morse test. 12 wpm send and receiving. This is about to be changed for a simulated QSO - still at 12wpm.
- If you pass the Morse test, you get an 'A' license, allows you on all bands, up to 400watts (mostly - there are limits on some bands (50MHz) and in some places.) Otherwise you get 144MHz up, still with 400watts.

Full callsigns begin "G", possibly followed by a country letter, followed by class number (currently '0' for 'A' and '7' for 'B'), followed by three letters, e.g. a Class A full callsign might look like this;

G0CNR (Which by a remarkable coincidence, is me!)

Note that whether you have a class A or class B callsign, you still took the

same exam, which I'm led to believe by friends who've sat both, is somewhat harder than the US exams.

Regards,

Hugh, G0CNR

I don't speak for Xerox. | "It's no use being clever - we are all
Rank Xerox Centre, UK. | clever here; just try to be kind - a
Huge.wgc1@rx.xerox.com | little kind." (F.J. Foakes Jackson)

Date: 2 Feb 1993 12:39:56 GMT
From: dog.ee.lbl.gov!hellgate.utah.edu!caen!saimiri.primate.wisc.edu!
news.larc.nasa.gov!arbd0.larc.nasa.gov!zawodny@network.UCSD.EDU
Subject: Solar panel night discharging
To: info-hams@ucsd.edu

In article <93032.115424MGB@SLACVM.SLAC.STANFORD.EDU>
<MGB@SLACVM.SLAC.STANFORD.EDU> writes:
>I have two solar power panels which I want to use to charge a deep cycle
>battery. I need a device to turn the circuit off when the panel would
>start to drain the battery rather than charge it. Does any body have
>a fairly simple circuit design, know of a device, or a way to accomplish
>this.

Just a thought, try a diode!

--

Joseph M. Zawodny (K04LW)	NASA Langley Research Center
Internet: zawodny@arbd0.larc.nasa.gov	MS-475, Hampton VA, 23681
Packet: ko4lw@wb0tax.va	

Date: Wed, 03 Feb 1993 00:47:32 GMT
From: mvb.saic.com!unogate!news.service.uci.edu!usc.edu!howland.reston.ans.net!
usenet.ins.cwru.edu!neoucom.edu!wtm@network.UCSD.EDU
Subject: Solar panel night discharging
To: info-hams@ucsd.edu

I have a 12 volt panel that was designed for recharging USCG navigation buoys. The panel simply uses a high current Schottky

diode to prevent the battery from discharging back through the solar panel.

The diode has the advantage of simplicity and has no mechanical contacts. Using a blocking diode has the disadvantage of imparting a voltage drop.

It shouldn't be too difficult to rig up a relay, but some current would be wasted in the sensing circuit and driving the relay coil. The exercise is to figure out if you'd lose more energy with an active switching circuit than efficiency you'd lose with a simple blocking diode.

73,
Bill

--
Bill Mayhew NEOUCOM Computer Services Department
Rootstown, OH 44272-9995 USA phone: 216-325-2511
wtm@uhura.neoucom.edu (140.220.1.1) 146.580: N8WED

Date: Wed, 3 Feb 1993 00:05:54 GMT
From: news.cerf.net!netsys!agate!spool.mu.edu!howland.reston.ans.net!
bogus.sura.net!udel!gatech!emory!kd4nc!ke4zv!gary@network.UCSD.EDU
Subject: Solar panel night discharging
To: info-hams@ucsd.edu

In article <1993Feb2.213544.7540@sunova.ssc.gov> greg_chartrand@qmail.ssc.gov
(Greg Chartrand) writes:
>Diodes are OK, but you loose the .3-.7V drop across the diode. This drop
>is equivalent to about 1/2 of one cell, a waste of valuable power! I
>think(?) I
>read a better solution in QST which was to put a 12v relay across the
>series diode with the relay coil connected to the solar pannel and the
>N.O. contacts across the diode. With this arrangement, when the solar
>pannel is putting out voltage(sun present) the relay activates and shorts
>the series diode, thus eliminating the voltage drop.
>When the sun goes away, the voltage accross the solar array no longer
>holds the relay in and it opens up the contacts leaving the diode in series to
prevent the leakage.

This will work, of course, but you've traded a small voltage drop for a continuous current draw via the relay coil. Just using a Schottky diode is likely both more reliable and less of a parasitic load. Note that most "12 volt" panels actually put out a no load voltage of about 17

volts in full sun.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

Date: 2 Feb 93 11:26:45 GMT
From: biosci!parc!rocksanne!kzin!hdavies@ames.arpa
Subject: Solar Panels: advice, sources
To: info-hams@ucsd.edu

In article 3352@ll.mit.edu, tcs@ll.mit.edu (Tom Sefranek) writes:

>In article <regmad.728588498@gsusgi1.gsu.edu>, regmad@gsusgi2.gsu.edu (Michael de Kraker) writes:

>|> davep@llnl.gov (Dave Parker) writes:

>|>

>|> >In article <Pine.3.05.9301311505.A7060-a100000@uaafhp.uark.edu>,

>|> >plaws@uaafhp.uark.edu (Peter Laws) wrote:

>|> >>

>|> >>

>|> >> I need to get a Solar panel (or panels) to charge a car or marine

>|> >> battery which will in turn power a 100W HF rig for an average of less than

>|> >> 1 hr/day. (<30 hr/mo -- nothing else on circuit)

>|>

>|> >Peter,

>|>

>|> >If you do find some good info on this, hope you share it with

>|> >the net. I too am interested in a similar set-up. (Especially the 20 bux

>|> >part!)

>

>I missed the origional... but be aware good panels go for \$5-10/watt!!!

>So what do you expect for \$20???

>

>|>

>|> >Dave

>|>

>|> >KD6.....?????? Still waiting ;-)

>|>

>|> Best panels are the flexible type sold at marine stores across

>|> the country.

>

>The best prices are NOT available at marine stores.

Date: 2 Feb 93 10:00:41 EST
From: mvb.saic.com!unogate!news.service.uci.edu!usc.edu!howland.reston.ans.net!
spool.mu.edu!sdd.hp.com!ncr-sd!ncrcae!ncrhub2!ncrgw2!psinntp!
arrl.org@network.UCSD.EDU
Subject: Solar Panels: advice, sources
To: info-hams@ucsd.edu

Date: Tue, 2 Feb 1993 22:20:25 GMT
From: rit!isc-newsserver!ultb!cep4478@cs.rochester.edu
To: info-hams@ucsd.edu

References <1038@arrl.org>, <1993Jan26.152134.5792@newsgate.sps.mot.com>,
<77911@apple.apple.COM>s.
Subject : Re: Ham Radio Causes Cancer!

markm@bigfoot.sps.mot.com (Mark Monninger) writes:

>inaccurate and misleading report. Showing people using cordless phones
>(implying they were cellular phones) was bad enough, but claiming that
>cellular phones emit 'high energy microwaves just like microwave ovens'
>was too much. I guess it's a bit naive to expect accurate coverage of

Actually, cellular=870 MHz-ish, and they used to make microwave ovens at
900 Mhz-ish. The power is much lower, but the exposure is probably longer
(if you talk a lot and can afford it).

cep

--

Christopher E. Piggott, WZ2B
President
Rochester Institute of Technology
Amateur Radio Club K2GXT

cep4478@ultb.isc.rit.edu
wz2b.ampr [44.69.0.1]
wz2b @ WB2PSI.#WNY.NY.USA.NA
CEP4478@RITVAXA.BITNET

Date: 2 Feb 93 23:46:14 GMT
From: unogate!news.service.uci.edu!ucivax!news.claremont.edu!bridge2!sgiblab!
sdd.hp.com!saimiri.primate.wisc.edu!usenet.coe.montana.edu!rpi!
newsserver.pixel.kodak.com!kodak!ornitz@mvb.saic.com
To: info-hams@ucsd.edu

References <1993Feb1.183848.7775@tellab5.tellabs.com>,

<1993Feb2.005209.6906@netcom.com>, <C1tyA1.8nC@cmptrc.lonestar.org>o
Subject : Re: Ionizing Radiation Made Simple - was R.F. Hazards revisited

In article <C1tyA1.8nC@cmptrc.lonestar.org> carter@cmptrc.lonestar.org
(Carter Bennett) writes:

>Actually, John, we really don't know completely about the effects of ANY RF
>(or for that matter, any EM fields) on the body. However, let's review what
>we do know, very briefly.

>

>The first real culprit that we've identified is "ionizing radiation."

>

>X-rays and Gamma emissions have wavelengths and "energy levels" which cause
>excitation of electron states at the atomic level. Exposure of materials to
>radiation can cause the breakup of atoms, splitting electrons off of the
>atomic shells and producing ions. Ultraviolet radiation has longer
>wavelength and causes excitation of molecular vibrations within different
>compounds, and can lead to molecules splitting into molecular ionic
>compounds. Infrared radiation (heat) will cause excitation in the molecular
>motion which can cause the molecules to split. [You've undoubtedly seen
>water boil.] Finally, microwaves can cause excitation in the larger
>molecules (such as those found in organic compounds which make up humans).

I think you need to study a little more about what is and what is not ionizing
radiation. Boiling of water is certainly not splitting water molecules.

In general, it can be said that visible and shorter wavelengths are associated
with atomic and molecular electronic spectra. The infrared region is
associated with molecular vibrational spectra (Carbon-Carbon stretch, etc.).
The microwave (and perhaps as low as the UHF) region is associated with
rotational spectra of entire molecules. Only the lowest frequencies are
associated with ionic conduction.

>As we move lower and lower through the spectrum, there are no real defining
>lines that separate the effects of one type of radiation from the others.
>While we have the statistical characteristics for different wavelengths
>listed above, (that's how it MOSTLY affects particles) there are always
>ratios of the other things happening with a given form of radiation.

For example, microwave absorption is turned into heat - which is how a
microwave oven operates.

>So what's so bad about all these ions? On their own, nothing. But in
>contact with other materials, they tend to react with other compounds
>(and human tissue) and cause chemical reactions with the rest of the body.
>These newly-created ions (often called "free radicals") will seek out and
>destroy other compounds in order to offset their charge. [Forgive the
>anthropomorphizing.] A real good example are Alpha particles, which are
>actually Helium nuclei. They can be blocked by aluminum foil, so they're

>easily shielded. But once inside the body, they wreak havoc on the whole
>system to fill the electron shells!

Where have you shown that the power levels associated with cellular telephones or even microwave ovens for that matter, can generate ionizing radiation or free radicals? It takes wavelengths as short as visible light to have sufficient energy to produce significant quantities of free radicals (and even here the materials involved are often specialized such as those involved with photosynthesis). Generally shorter wavelength sources such as ultraviolet and X-ray are needed to produce ionization. Free radicals can even be produced by mere mechanical means without any form of electromagnetic radiation!

>So far, we know what goes on at the very small level. Enough to realize
>that we shouldn't X-ray pregnant women, or enable the microwave oven to
>operate with the door open. When we get to the larger scales, we really
>don't understand what we might be doing. But there now seems to be
>evidence that suggests we'd better find out.

We don't put pregnant women in boiling water either which is basically what operating the oven with the door open would do.

>Obviously, we haven't got conclusive evidence across the board, but a number
>of studies have been made. Connecticut has banned police-radar units which
>operate within patrol vehicles because they "may cause cancer." A good
>sample of doctors recommend that small children and pregnant women not use
>electric blankets because of possible bad effects of household 60 Hz current.
>One research report actually suggests a link between leukemia and proximity
>to high-power electric substations.

Very few of these studies are not even statistically meaningful. Testicles are quite temperature sensitive (wearing boxer shorts or tight bikinis can change sperm counts). What about the plasticizers used in the vinyl seats the patrolmen sit in all day (these are often phthalates with an internal benzene-like structure)? These plasticizers are what coat your windshield and make it greasy when you park your car in the hot sun.

Most doctors have no better idea than the average citizen of what the science of electromagnetic fields is about. I have had a form of diathermy treatment for plantar warts. I had to explain to the doctor how the machine worked. It was definitely electromagnetic radiation!

Finally, the transformers in power substations are or were filled with flame retardant oils such as the chlorinated biphenyls (which are known carcinogens). The land around substations is often sprayed with defollients like 2,4D and 2,4,5T (which often contain small amounts of dioxins).

A STATISTICAL CORRELATION DOES NOT IMPLY CAUSALITY.

(208) 263-4290

Berg Enterprises
POB 4207
Carlsbad CA 92008
(619) 434-3266

Dick Smith Electronics
POB 468
Greenwood IN 46162
(317) 888-7265

Edmund Scientific Co
101 E Gloucester Pike
Barrington NJ 08007-1380
(609) 573-6250

Harding Think Tank, Inc.
633 Washington St
Grand Haven MI 49417
(616) 847-0989

Solar Electric
116 4th Street
Santa Rosa, CA 95401
1-707-452-1990

Sovonics - see QST 5/87 New Products page 20
No direct sales - contact for nearest distributor
Energy Conversion Devices, Inc.
1100 West Maple Rd
Troy MI 48084

Sovonics distributor:
Seelye Equipment Specialists
913 State St
Charlevoix MI 49720
(616) 547-9430

Sun Electric Company
POB 1499
920 South First
100 Skeels St
Hamilton MT 59840
(406) 363-6924

Sunlight Energy Systems
Mike Bryce WB8VGE

2225 Mayflower NW
Massilon OH 44646
(216) 832-3114

Yellow Jacket Solar
POB 253
Yellow Jacket CO 81335-0253
(303) 562-4884

Ed Hare, KA1CV
American Radio Relay League
225 Main St.
Newington, CT 06111
(203) 666-1541 - voice
ARRL Laboratory Supervisor
RFI, xmtr and rcvr testing

ehare@arrl.org

You will never put the puzzle together
if you keep putting all the pieces
back in the box.

End of Info-Hams Digest V93 #158
